Chapter 13



13. PROTECTION AND DAMAGE PREVENTION

Preventing environmental damage is easier and far less costly than trying to restore degraded ecosystems. However, the most effective prevention measure—prohibition of any destructive use of the land—is generally not an option on military installations. Thus, a compromise between total protection and unrestricted military training must be reached.

Natural resources management on Fort Wainwright is predicated on the primacy of the military mission and the belief that effective training can be accomplished with minimal long-term environmental damage. The military community now realizes that effective training and environmental stewardship are compatible, and indeed necessary for the maintenance of a quality military training environment.

13-1 Objectives

Military Readiness

- Ensure no net loss in the capability of Fort Wainwright's lands to support existing and projected military missions
- ► Maintain quality training lands through damage minimization, mitigation, and restoration
- Distribute activities such as military training, recreation, restoration of training damage, and habitat management to minimize conflicts with each other

 Convert former Nike missile sites into modern training sites

Stewardship

- Foster a conservation ethic in those who use Fort Wainwright's lands to minimize damage to natural resources
- Provide protection of lands from wildfires
- Provide protection to areas of special ecological concern

Compliance

▶ Protect, restore, and manage sensitive species, wetland, and unique areas

13-2 Military Mission Management

Damage prevention and protection of the ecosystem is accomplished at Fort Wainwright through two programs. The first method of preventing damage is to educate soldiers through the Environmental Awareness program, a component of ITAM. The second method used is to distribute activities to minimize impacts on the ecosystem and to reduce conflicts. This is accomplished through another component of ITAM, the Training Requirements Integration program.

13-2a Environmental Awareness

Project Description. Fully implement the Environmental Awareness (EA) component of ITAM by 1999 and conduct this program throughout the duration of this INRMP.

Project Justification. The Sikes Act requires "no net loss" in the capability of military lands to support the military mission. EA supports this compliance goal by reducing maneuver damage, reducing long term maintenance costs for repair of training lands, and improving operational security skills. The objective is to have up-to-date materials available to every unit operating in the field, and to show videos on environmental awareness to as many troops and public users as possible.

Project Prescription. EA is the component of ITAM that fosters a conservation ethic in military person-

nel. EA consists of the following three elements: training/education materials, an implementation plan for awareness training, and command emphasis. Fort Wainwright's EA program was initiated in 1997 and will be fully implemented by 1999. EA consists of the development of a videotape production, soldier handbooks, soldier field cards, and posters focused on maneuver damage prevention. The videotape, which is shown to all soldiers during inprocessing and at Range Control safety briefings, focuses on prevention of maneuver damage. The handbook includes a summary of restrictions on training to preserve the quality of training lands as well as a map showing areas with special environmental considerations. Videotape, handbooks, and soldier field cards were all developed in conjunction with Fort Wainwright's Environmental Awareness program. Modifications will likely occur around 1999.

13-2a(1) EA Updates and Printing

Description. Update and print soldier handbooks, soldier field cards, and posters focused on maneuver damage prevention. EA materials become outdated as conditions and training missions change. They must be updated to remain effective.

Methods. Materials were last updated in 1997. It is anticipated that changes will be necessary in 1999 or 2000. Updates are dependent upon changes in environmental conditions or military mission activities.

13-2a(2) Soldier-Animal Safety Handbook

Description. Create a handbook to minimize interactions between soldiers and wildlife, especially wildlife that may be harmful to humans, such as bears. Safety is an important aspect of soldier training, often emphasized by all levels of command. Reductions in the number of interactions between wildlife and soldiers is also beneficial to wildlife in general. This handbook would be useful to all USARAK installations and USAF bases in Alaska, but would be especially useful to Fort Greely and Fort Wainwright. Benefits to training include reduction of lost training days due to soldier and animal conflicts.

Methods. USARAK will create a soldier-animal safety handbook by 1999. Handbooks will be focused on reducing conflicts between soldiers and

animals in the field. The handbook will include information on both bear and moose conflicts.

13-2a(3) Soldier-Animal Safety Video 1999

Description. Create a short educational video to minimize interactions between soldiers and wild-life, especially wildlife that may be harmful to humans, such as bears. Safety is an important aspect of soldier training, often emphasized by all levels of command. Reducing interactions between wildlife and soldiers is beneficial to wildlife in general. This video would be useful to all USARAK installations and USAF bases in Alaska, but is especially useful to Fort Greely and Fort Wainwright. Benefits to training include reduction of lost training days due to soldier and animal conflicts.

Methods. USARAK will create a soldier-animal safety video by 1999. The script has been developed for this video.

13-2b Training Requirements Integration

Project Description. Conduct the Training Requirements Integration (TRI) component of ITAM during 1998-2002.

Project Justification. The Sikes Act requires "no net loss" in the capability of military lands to support the military mission. TRI includes coordination of use and restrictions needed to maintain quality training land.

Project Prescription. The TRI component of ITAM integrates the installation's training requirements for land use, range operations, and training land management process and the installation's training readiness requirements, with the natural resource conditions of the installation's lands derived from LCTA and other natural resource management processes. Through TRI, the installation operations/training staff, supported by the natural resource management/ environmental staff, exercises a decision-making process to help identify of options for allocating specific training requirements to specific land parcels. The decision-making and allocation process is based on a concept of land carrying capacity/sustainment factors. Such factors are based on training events and the effects of those events on natural resource conditions.

13-2b(1) ArcView User-Interface Program

Description. Create and implement an interactive Map Object user-interface program to allow simple point and click menus for trainers and Range Control personnel to access relevant data layers. Benefits to training include up-to-date maps and overlays at Range Control, printed maps of scheduled training areas, and a connection to the Range Facilities Management Support System (RFMSS).

Methods. USARAK used a contract to build the interface and deliver Version 1.0 in 1998. Computers available at Range Control are not able to run the ArcView program. USARAK will locally purchase computers and printers for each Range Control to store, display, and print maps and overlays.

13-2b(2) Purchase Digital Orthophotography 1999

Description. Obtain digital orthophotography. There are no digital orthophotographs of Fort Wainwright. These digitally rectified photos will be used in the ArcView front-end program at Range Control. Benefits include accurate backdrops for scheduling training areas. The quality of future GIS layers will be significantly improved due to current background information.

Methods. USARAK will purchase digital orthophotography.

13-3 Fire Management

Interior Alaska ecosystems require fire for continued functionality. However, wildfires are a concern at Fort Wainwright due to their impact on human activities and structures, and military operations. The Fort Wainwright Fire Department has primary responsibility for fire suppression on Main Post, and AFS has primary responsibility on YTA and TFTA.

13-3a Fire Management Plan

Project Description. Write, update, and implement a fire management plan for Fort Wainwright, which will include a prescribed burning plan.

Project Justification. The plan is a requirement of the Memorandum of Agreement on fire management and AR 200-3. Implementation of the plan will reduce the forest fire hazard caused by incendiary type weapons and will enhance habitat as part of ecosystem management.

Project Prescription. AFS is developing a prescribed burning plan for the installation in conjunction with BLM and USARAK. This project was discussed in a September 1994 meeting among the organizations¹⁰. It is underway by the Alaska Fire Service and will be completed by 1999. A significant concern is the issue of protecting trespass structures. AFS is trying to eliminate the expense of protecting encroachment structures statewide.

ADF&G uses prescribed burning for habitat restoration (reducing the amount of black spruce) on state lands west of Wood River. This burning is facilitated through the *Western Tanana Flats Prescribed Burning Plan* (State of Alaska, 1995) (see Section 11-3c).

13-3b Wildfire Prevention and Suppression

Project Description. Prevent and suppress undesirable wildfires.

Project Justification. The objective is not to protect the land from fire, but to protect human structures and the military mission.

Project Prescription. The Alaska Fire Service (AFS), a BLM agency, has primary fire suppression responsibility for wildfires on lands in central and northern Alaska. The Army has an Inter-Service Support Agreement with BLM whereby AFS is provided facilities on Fort Wainwright in exchange for fire protection on Army lands.

Both prevention and suppression of undesirable wildfires are planned during 1998-2002. Cutting fuel breaks specifically for fire control occurs minimally on Fort Wainwright. Major highways, waterways, wet areas, and smaller roads act as firebreaks on much of the installation. The likelihood of a fire crossing these obstructions is low so it would not be cost effective to create and maintain firebreaks.

The Fort Wainwright Fire Department monitors fire danger parameters; when certain levels of risk are reached, restrictions on military activities are imposed. The Fire Department collects weather readings during fire season. Data are used to calculate a Fire Danger Rating (FDR) using the Canadian Forest Fire Danger Rating System, which is an indication of wildfire danger. The FDR is provided to Range Control, which restricts the use of munition and pyrotechnics as fire danger increases.

Fire management protection options for Fort Wainwright are described in Section 11-2d, and Figure 11-2d shows fire management areas on Fort Wainwright.

13-3c Prescribed Burning

Project Description. Use prescribed burning to manage natural resources and reduce wildfire losses.

Project Justification. The land and its natural resources require fire. Fire has been a natural force in the Alaska interior for thousands of years. It is a key environmental factor in cold-dominated ecosystems. Without fire, organic matter accumulates, the permafrost table rises, and ecosystem productivity declines. Vegetation communities become much less diverse, and animal species normally associated with certain successional stages find the environment unsuitable. Fire rejuvenates these ecosystems. It removes some insulating organic matter, resulting in a warming of soils. Nutrients are added to the soil from ash and increased decomposition rates. Vegetation regrowth quickly occurs, and the cycle begins again.

Prescribed burning is a valuable asset to Fort Wainwright. Burning reduces the fuel load, which means wildfires are less likely to start and easier to control. Burning often opens areas for additional military training, particularly maneuvers that are hampered by dense cover.

The 250,000-acre Blair Lakes burn in 1980 is evidence of the importance of prescribed burning to ecosystem development. A five-year study by ADF&G (Simpson and Shields, 1995) on four sites within the burn found that the following occurred.

 Moose moved into and heavily browsed the lightly burned study area, which revegetated with prolific willow sprouting

¹⁰ Memorandum: Tanana Flats Fire Plan, to DPW, Fort Richardson from Chief, Environmental Resources Division, Fort Wainwright, 3 Oct 94.

- Moose moved into and heavily browsed prolific aspen sprouts and suckers in one intensively burned study area
- Two study areas contained heavily burned black spruce; little revegetation of preferred browse species occurred and moose use was low
- There was little evidence of snowshoe hares in all but the lightly burned study area
- ▶ By 1985, all four study areas showed cover increases in tree seedlings, tall shrubs, low shrubs, and mosses; three areas showed increases in herbaceous cover

Project Prescription. The prescribed burning "window" is very narrow, particularly during spring between loss of snow cover and green-up, usually ocurring in May. Often this period is very wet, which makes burning difficult. It is often easier to get good burning conditions in fall, but there is debate over the relative value of fall burning. In addition, winds must be such that they do not blow smoke into urban areas, which further narrows the window. A window exists during mid-summer which better emulates natural fire regime. This is also a time when the resources necessary to accomplish prescribed burning objectives are needed elsewhere, making it impractical to plan prescribed fires. An air permit from the Alaska Department of Environmental Conservation is required for prescribed burning, as well as NEPA documentation.

Individual prescribed burns will have plans and appropriate NEPA documentation prepared after coordination between the BLM/NFO, Natural Resources Branch and the Fort Wainwright Fire Department. AFS may be used to prepare plans for USARAK. Burn plans are used to evaluate and minimize risks associated with prescribed burning, and will include how the fire will be set. Generally contract aircraft are utilized with either a helitorch (flying drip torch) or aerial ignition devices (ping-pong balls with flammable chemical mixtures).

Recent changes to the central and eastern YTA fire protection status may reduce the need for prescribed burns, since wildfires will occur more naturally. It may also reduce the need for the boundary fire line. This will allow USARAK to focus resources on prescribed burning in western YTA.

Prescribed burns specifically planned are described below. Future prescribed burning will be based on lessons learned from these three burns. It is difficult to long-range plan prescribed burning due to weather, military training, and availability of resources.

13-3c(1) Prescribed-Burn, Stuart Creek Impact Area

Description. Prescription burn the Stuart Creek Impact Area, YTA. Benefits of this burn to training include reduced fuel load, reduced fire fighting costs, and protection of range facilities. Benefits to the environment are considerable, particularly in areas that have not burned in recent years.

Methods. This prescribed burn was attempted in 1996, but results were too patchy to accomplish burning objectives. USARAK will use the services of AFS to repeat this burn. The burn is planned for 1998.

13-3c(2) Prescribed-Burn, Manchu Range

Description. Prescribe-burn Manchu Range to reduce fuel loads and prevent serious fires from occurring as a result of small arms firing.

Methods. USARAK will use the services of AFS to conduct this burn. The burn is planned for 1998.

13-3c(3) Prescribed-Burn, Grouse Site 2-28

Description. Prescribe-burn grouse site 2-28, near the intersection of Quarry and Manchu roads on YTA. This site was cut in 1995 specifically to improve grouse habitat. About two-thirds of the site has revegetated to primarily bluejoint grass which is hindering regrowth of desired tree and understory vegetation. Fire, under hot-burning conditions, can significantly hinder the growth of bluejoint grass, allowing a more desirable plant succession on the site.

Methods. USARAK will use the services of AFS to conduct this burn. The burn is planned for late June-early July 1998. This site offers a good opportunity to evaluate prescribed habitat management since the area has been cut and will soon be burned.

13-3c(4) Prescribed-Burn, Husky Drop Zone

Description. Prescribe-burn Husky Drop Zone to reduce woody vegetation and provide growth of grasses.

Methods. USARAK will use the services of AFS to conduct this burn. The burn is planned for late September 1999 or early Spring 2000. This site offers a good opportunity to evaluate prescribed habitat management since the area has been cut and will soon be burned.

13-4 Special Interest Areas

Designation of special protection status for sensitive or fragile areas is an important management tool. It is often easier and more cost effective to place use restrictions on some areas to minimize damage or disturbance than to mitigate after damage or disturbance has ocurred.

As part of the NEPA process, the Natural Resources Branch reviews proposed projects for Fort Wainwright. Natural resources managers can identify concerns and recommend measures to minimize damage. Examples include avoiding cultural resource sites and wetland, filling excavations after exercises, and siting missions in areas based on environmental considerations and suited to training needs. See Chapter 19 for more information.

Fort Wainwright has several areas with special natural features. They harbor sensitive or unique wild-life species or represent unique plant communities. The following are special area categories and accompanying restrictions. Most areas either have been or soon will be digitized in the GIS, and maps showing restricted areas will be available to project planners.

13-4a Write Special Interest Area Management Plan

Project Description. Write, update, and implement a special interest area management plan for Fort Wainwright.

Project Justification. The management and protection of special interest areas is consistent with ecosystem management principles and is required by the Sikes Act and AR 200-3. The plan would maintain and enhance the health, productivity, and biological diversity of training lands.

Project Prescription. This plan will be completed by 1999. It will include two major decisions. The

first is whether to designate additional special interest areas, or remove any of those already designated. The second is to evaluate the cost/benefits of each restriction and make adjustments if needed, as well as consider additional restrictions to protect natural resources.

13-4b Manage Special Interest Areas

Project Description. Manage special interest areas on Fort Wainwright.

Project Justification. The management and protection of special interest areas is consistent with ecosystem management principles and is required by the Sikes Act and AR 200-3. The plan would maintain and enhance the health, productivity, and biological diversity of training land.

Project Prescription. Special interest areas will be individually managed according to their specific needs. Management and/or protective measures for each area are specified below.

13-4b(1) Sage Hill Special Interest Area

Description. Manage and protect Sage Hill special interest area. Sage Hill overlooks a wetland (Sage Hill pond) in the main cantonment area. This is a Watchable Wildlife area with a planned viewing platform and signage.

Methods. This scenic site has been damaged by gravel removal. No further gravel removal will be allowed. Prior approval from the Environmental Resources Department will have to be obtained before ground or vegetation disturbance occurs.

13-4b(2) Granite Tors Special Interest Areas

Description. Manage and protect Granite Tors special interest area. The Granite Tors rock outcrops along the eastern portion of YTA likely have cultural significance.

Methods. USARAK has imposed restrictions on development, ground disturbance, and vegetation removal in the Granite Tors to protect any cultural resources.

13-4b(3) Wood River and Clear Creek Buttes

Description. Manage and protect Wood River and Clear Creek Buttes special interest areas. Buttes near

Blair Lakes and along the Wood River have cultural and ecological significance.

Methods. Many of these buttes have cleared helicopter pads for military training, especially since they are on high, relatively dry ground. These buttes will be placed off-limits to ground and vegetation-disturbing activities with exception of existing helicopter pads. This restriction should not impact military training since most missions on buttes require vegetative cover for concealment.

13-4b(4) Moose Calving Areas on Tanana Flats

Description. Manage and protect moose calving areas on TFTA. ADF&G have identified six parcels on TFTA as important moose calving areas from 15 May through 15 June annually.

Methods. The Army has agreed with ADF&G (U.S. Army, 1986) to conduct operations in such a manner that will not adversely affect calving in these

parcels between 15 May to 15 June. Since virtually no training occurs on TFTA during warm months, this has not impacted military training on Fort Wainwright.

13-4b(5) Moist Tundra Special Interest Areas

Description. Manage and protect moist tundra special interest areas. Moist tundra is one of the most easily damaged ecosystems on Fort Wainwright, especially during warm weather.

Methods. On Fort Wainwright, moist tundra occurs above treeline on tops of hills, 2,500-3,000 feet above sea level. The Army provides protection for fragile moist tundra by requiring it be frozen prior to military training. In addition, snow is pushed rather than plowed to bare ground, when creating winter trails for military access. This prevents most damage to the protective vegetation mat.